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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,026	02/23/2004	Akihito Tanimoto	Q79962	3770
23373 7590 01/15/2009 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER KRISHNAN, VIVEK V				
ART UNIT 2445		PAPER NUMBER		
MAIL DATE 01/15/2009		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/783,026

Applicant(s)

TANIMOTO, AKIHITO

Examiner

VIVEK KRISHNAN

Art Unit

2445

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This action is responsive to the Amendment/Arguments filed on October 14, 2008. Claims 1-17 are pending.

Response to Amendment

1. Claims 1-12 have been amended. Claims 13-17 have been added. Hence, Claims 1-17 are currently pending.

Response to Arguments

2. Applicant's arguments with respect to objections to the Specification due to informalities with respect to the title and abstract have been fully considered and are persuasive. The objections to the title and abstract have been withdrawn.

3. Applicant's arguments with respect to Claim Objections due to informalities have been fully considered and are persuasive. The objections to Claims 1-12 have been withdrawn.

4. Applicant's arguments with respect to Claim Rejections under 35 U.S.C. 101 have been fully considered and are persuasive. The rejections of Claims 10-12 have been withdrawn.

5. Applicant's arguments with respect to Claim Rejections under 35 U.S.C. 102 have been fully considered but they are not persuasive.

As to Applicant's arguments with respect to Claims 1 and 9 (Pg. 22-23 of Remarks):

Applicant alleges that Shiraiwa does not disclose that after the role of a first data source apparatus and the role of the printing device have been determined, the role of the first data source apparatus and the role of the printing device are switched when the printing device receives a connection request from a second apparatus, which is newly connected to the printing device.

The features Applicant is relying upon in the argument above are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Contrary to Applicant's arguments, the claims indicate only that the role of the printing device is switched from a communication slave to a communication master. Furthermore, the steps of receiving a connection request from a first data source apparatus, receiving a connection request from a second data source apparatus, and setting the role of the printing device, are recited independently of one another (i.e. do not necessarily occur simultaneously or as a result of one of the recited steps). Shiraiwa, Figure 5, discloses connections with both a host computer and a digital camera. Shiraiwa discloses switching the role of a printing device from a slave to a master when the connection to the printing device is switched from a host computer to a digital camera. Hence connections are able to be established with both a host computer (first data source apparatus) and a digital camera (second data source apparatus).

6. Applicant's arguments with respect to Claim Rejections under 35 U.S.C. 103 have been fully considered but they are not persuasive.

As to Applicant's arguments with respect to Claims 2-8, 10-12 (Pg. 23-24 of Remarks):

In view of the aforementioned argument that Shiraiwa discloses each and every limitation of Claims 1 and 9, Applicant's arguments are not persuasive.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0105678 to Shiraiwa (hereinafter "Shiraiwa").
9. As to Claim 1, Shiraiwa discloses a printing method carried out by a printing device and a printing device (referenced hereinafter as the printing method) for receiving data from a plurality of data source apparatuses and then printing said data, said method comprising the operations of:

receiving a connection request from a first data source apparatus and establishing a logical connection with said first data source apparatus (Shiraiwa; Figures 5-8, and paragraphs 80 and 87-89, receiving a connection request from a host computer and establishing a connection with the host computer);

receiving a connection request from a second data source apparatus and initially setting the role of said printing device as a communication slave while a connection is established with said first data source apparatus, and then switching the role of said printing device from a communication slave to a communication master to enable a connection to be established with both said first and second data source apparatuses (Shiraiwa; Figures 5-8, and paragraphs 80 and 87-89, receiving a connection request from a digital camera; setting the role of the printer to function/slave while connected to the host computer; switching the role of the printer from a function/slave to a host/master);

receiving data from said first and second data source apparatuses while the connections are established with said first and second data source apparatuses (Shiraiwa; Figures 5-8, and paragraphs 80 and 87-89, receiving data from host computer and digital camera);

processing and printing said data received from said first data source apparatus and said second data source apparatus (Shiraiwa; Figures 5-8, and paragraphs 80 and 87-89, processing and printing data received from host computer and digital camera).

10. Claim 9 has similar limitations to Claims 1. Therefore it is rejected under Shiraiwa for the same reasons as set forth in the rejection of Claim 1.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 2, 3, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraiwa as applied to Claim 1 above, and further in view of U.S. Patent Application Publication No. 2002/0075510 A1 to Martinez (hereinafter "Martinez").

13. As to Claim 2, Shiraiwa discloses each and every limitation of Claim 1. Shiraiwa does not explicitly disclose, however Martinez discloses an operation in which, if a logical connection is established with said second data source apparatus and data are received from said second data source apparatus while a connection is also established with said first data source apparatus and data received from said first data source apparatus are being transferred to a first data processing portion from among a plurality of data processing portions for processing data received from said data source apparatuses, then said received data are stored temporarily in a buffer, and if said data can be transferred to a second data processing portion, said data are read from said buffer and transferred to said second data processing portion (Martinez; Figures 2 and 5, and paragraphs 15 and 16, multiple apparatuses connected with printer; data processing portions for processing data received from the apparatuses; storing received data temporarily in a queue/buffer until the data can be processed).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a printing device and first and second data source apparatuses, as disclosed by Shiraiwa, to include data processing portions and storing received data in a buffer temporarily, as disclosed by Martinez, in order to manage multiple requests to a printer.

14. As to Claim 3, Shiraiwa discloses each and every limitation of Claim 1. Shiraiwa does not explicitly disclose, however Martinez discloses an operation in which, if a logical connection is established with said second data source apparatus and a command or data are received from said second data source apparatus while a logical connection is also established with said first data source apparatus and data received from said first data source apparatus are being transferred to a first data processing portion from among a plurality of data processing portions for processing data received from said data source apparatuses, then transmission of a response signal to said second data source apparatus is delayed, and if the data received from said second data source apparatus can be transferred to a second data processing portion, then said response signal is transferred to said second data source apparatus (Martinez; Figures 2 and 5, and paragraphs 15, 16, and 22-25, multiple apparatuses connected with printer; data processing portions for processing data received from the apparatuses; storing received data temporarily in a queue/buffer until the data can be processed; indicating status of print job).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a printing device and first and second data source apparatuses, as disclosed by Shiraiwa, to include data processing portions and delaying transmission of a response signal

until received data can be processed, as disclosed by Martinez, in order to manage multiple requests to a printer.

15. Claims 10 and 11 have similar limitations to Claims 1-3. Therefore they are rejected under Shiraiwa and Martinez for the same reasons as set forth in the rejections of Claims 1-3.

16. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraiwa as applied to Claim 1 above, and further in view of U.S. Patent No. 5,995,718 to Hiraike et al. (hereinafter "Hiraike").

17. As to Claim 4, Shiraiwa discloses each and every limitation of Claim 1. Shiraiwa does not explicitly disclose, however Hiraike discloses the step in which, if a logical connection is established with said second data source apparatus and a request for notification of a credit value indicating the data size of the receivable data is received from said second data source apparatus while a logical connection is also established with said first data source apparatus and data received from said first data source apparatus are being transferred to a first data processing portion from among a plurality of data processing portions for processing data received from said data source apparatuses, then said second data source apparatus is informed of said credit value in response to said notification request, and thus data are received from said second data source apparatus, stored temporarily in a buffer, and if said data can be transferred to a second data processing portion, then said data are read from said buffer and transferred to said second data processing portion (Hiraike; Figures 4, 5, 7, 8, and 17, printer informing a data source apparatus

of available capacity upon request; storing received data temporarily in memory until data can be transferred for processing).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a printing device and first and second data source apparatuses, as disclosed by Shiraiwa, to include to include data processing portions and a credit value, as disclosed by Hiraïke, in order to determine the available capacity of a printer prior to storing data in the printer memory.

18. As to Claim 5, Shiraiwa and Hiraïke disclose each and every limitation of Claim 4. Hiraïke further discloses wherein {an error message} [...] is transmitted back to said second data source apparatus in said transfer operation if an empty region having a size which is equal to or greater than said credit value, cannot be retained in said buffer upon reception of said credit value notification request from said second data source apparatus (Hiraïke; Figures 4, 5, 7, 8, and 17, returning an error message when not enough memory is available).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a printing device and first and second data source apparatuses, as disclosed by Shiraiwa, to include to include data processing portions and a credit value, as disclosed by Hiraïke, in order to determine the available capacity of a printer prior to storing data in the printer memory.

Hiraïke does not explicitly disclose transmitting a credit value indicating zero.

However, it would have been an obvious matter of design choice to transmit a zero value instead of an error message, since applicant has not disclosed that transmitting a zero solves any

stated problem or is for any particular purpose and it appears that the invention would perform equally well with the transmission of an error message.

19. Claim 12 has similar limitations to Claims 1 and 4. Therefore it is rejected under Shiraiwa and Hiraike for the same reasons as set forth in the rejections of Claims 1 and 4.

20. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraiwa and Martinez as applied to Claims 2 and 3 above, and further in view of U.S. Patent Application Publication No. 2004/0169880 A1 to Nakanishi et al. (hereinafter "Nakanishi").

21. As to Claim 6, Shiraiwa and Martinez disclose each and every limitation of Claims 2 and 3. Shiraiwa and Martinez do not explicitly disclose, however Nakanishi discloses wherein a logical connection is established with said first and second data source apparatuses in accordance with Bluetooth specifications in said connection operation, and wherein a profile provided on an upper Object Exchange Protocol OBEX level is executed in at least one of said transfer operation and said transmitting back operation (Nakanishi; paragraph 193, Bluetooth and OPEX).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify connection and transfer steps, as disclosed by Shiraiwa and Martinez, to include Bluetooth and OBEX, as disclosed by Nakanishi, in order to provide standard functionality for managing printers using Bluetooth technology.

22. As to Claim 7, Shiraiwa, Martinez, and Nakanishi disclose each and every limitation of Claim 6. Nakanishi further discloses wherein said profile is at least one of a Basic Printing Profile (BPP) and a Basic Imaging Profile (BIP) (Nakanishi; paragraph 193, Bluetooth and BPP).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify connection and transfer steps, as disclosed by Shiraiwa and Martinez, to include Bluetooth and BPP, as disclosed by Nakanishi, in order to provide standard functionality for managing printers using Bluetooth technology.

23. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraiwa and Hiraike as applied to Claim 4 above, and further in view of U.S. Patent Application Publication No. 2005/0286466 A1 to Tagg et al. (hereinafter "Tagg").

24. As to Claim 8, Shiraiwa and Hiraike disclose each and every limitation of Claim 4. Shiraiwa and Hiraike do not explicitly disclose, however Tagg discloses wherein a logical connection is established with said first and second data source apparatus in accordance with Bluetooth specifications in said connection operation, and wherein Hardcopy Cable Replacement Profile (HCRP) is performed in said transfer operation (Tagg; Table 3, Bluetooth and HCRP).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify connection and transfer steps, as disclosed by Shiraiwa and Hiraike, to include Bluetooth and HCRP, as disclosed by Tagg, in order to provide standard protocol associated with Bluetooth technology.

25. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraiwa as applied to Claim 1 above, and further in view of Martinez, Nakanishi, and U.S. Patent No. 5,799,206 to Kitagawa et al. (hereinafter "Kitagawa").

26. As to Claim 15, Shiraiwa discloses each and every limitation of Claim 1. Shiraiwa does not explicitly disclose, however Martinez discloses an operation in which, if a logical connection is established with said second data source apparatus and a command or data are received from said second data source apparatus while a logical connection is established with said first data source apparatus and data received from said first data source apparatus are being transferred to a first data processing portion, from among a plurality of data processing portions for processing data received from said data source apparatuses, then transmission of a response signal to said second data source apparatus is delayed, and if the data received from said second data source apparatus can be transferred to a second data processing portion, then said response signal is transferred to said second data source apparatus (Martinez; Figures 2 and 5, and paragraphs 15, 16, and 22-25, multiple apparatuses connected with printer; data processing portions for processing data received from the apparatuses; storing received data temporarily in a queue/buffer until the data can be processed; indicating status of print job),

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a printing device and first and second data source apparatuses, as disclosed by Shiraiwa, to include data processing portions and delaying transmission of a response signal until received data can be processed, as disclosed by Martinez, in order to manage multiple requests to a printer.

Shiraiwa does not explicitly disclose, however Nakanishi discloses wherein a logical connection is established with said first and second data source apparatuses in accordance with Bluetooth specifications in said connection operation, wherein a profile provided on an upper Object Exchange Protocol (OBEX) level is executed in at least one of said transfer operation and said transmitting back operation (Nakanishi; paragraph 193, Bluetooth and OPEX),

wherein said profile is at least one of a Basic Printing Profile (BPP) and a Basic Imaging Profile (BIP) (Nakanishi; paragraph 193, Bluetooth and BPP),

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify connection and transfer steps, as disclosed by Shiraiwa, to include Bluetooth and OBEX, as disclosed by Nakanishi, in order to provide standard functionality for managing printers using Bluetooth technology.

Shiraiwa does not explicitly disclose, however Kitagawa discloses wherein, if said [printing profile] receives a command or data from said second data source apparatus, in a case where a first data transfer channel corresponding to said first data source apparatus is open, then said [printing profile] executes operations comprising:

requesting a stream pipe interface portion to open a second data transfer channel corresponding to said second data source apparatus; in response to said request to open said second data transfer channel, if a notice of open error is returned from said stream pipe interface portion, then delaying transmission of a response signal to said second data source apparatus; and if the second data transfer channel is opened, transmitting the response signal to the second data source apparatus;

wherein said stream pipe interface portion comprises an interface of a stream pipe for forming a plurality of data transfer channels to a plurality of data processing portions, wherein stream pipe interface portion serves to open one of said plurality of data transfer channels and to close all others of said plurality of data transfer channels, and wherein, if a requested one of said plurality of data transfer channels is closed, a request to open said requested data transfer channel is received from a profile, which is capable of connecting with said requested data transfer channel, and if data is not being transmitted over another open one of said plurality of data transfer channels, then said stream pipe interface portion opens said requested data transfer channel and closes all others of said plurality of data transfer channels, and thus enables data to be transferred over said open requested data transfer channel (Kitagawa; column 11 lines 50-67, column 12 lines 1-67; requesting opening of another channel, if error message is returned, delaying positive response, if channel is opened, transmitting positive response; where one channel is opened at a time and all others are kept closed, and if data is not being transmitted over a channel, the channel is closed).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify receiving a command or data, as disclosed by Shiraiwa, to opening and closing channels, as disclosed by Kitagawa, in order to manage a print system in which multiple computers are connected to a printer.

Allowable Subject Matter

27. Claims 13, 14, 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons the subject matter is allowable:

As to Claims 13 and 14, the prior art of record does not appear to teach or suggest or render obvious the claimed limitations in combination with limitations as recited in independent Claim 1. The prior art of record fails to teach or suggest in combination of claimed elements including "requesting a stream pipe interface portion to open a second data transfer channel corresponding to said second data source apparatus", "transmitting to said second data source apparatus, in response to said request to open said second data transfer channel, a reception possible signal, even if a notice of open error is returned from said stream pipe interface portion", "wherein said reception possible signal is identical to a signal indicating that said second data transfer channel is open", and "receiving data from said second data source apparatus and temporarily storing said data received from said second data source apparatus in said buffer " as recited in Claim 13. Claim 14 is dependent on Claim 13 and is allowable for the same reasons as indicated above.

As to Claims 16 and 17, the prior art of record does not appear to teach or suggest or render obvious the claimed limitations in combination with limitations as recited in independent Claim 1. The prior art of record fails to teach or suggest in combination of claimed elements including "even if a notice of open error is returned, after said credit value is notified to said second data source apparatus in response to said notice request, then said HCRP receives data

from said second data source apparatus", "if said HCRP is notified of said credit value of said second data source apparatus, then said HCRP requests said stream pipe interface portion to open said second data transfer channel", and "in response to said request of said stream pipe interface portion to open said second data transfer channel, if a notice of open error is returned from said stream pipe interface portion, then said HCRP temporarily stores data in said buffer" as recited in Claim 16. Claim 17 is dependent on Claim 16 and is allowable for the same reasons as indicated above.

Conclusion

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIVEK KRISHNAN whose telephone number is (571) 270-5009. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrice Winder/
Primary Examiner, Art Unit 2445

/V. K./
Examiner, Art Unit 2445